

**Notice of Allowability**

Application No.

09/935,407

Applicant(s)

HAYASHI ET AL.

Examiner

Art Unit

Amy B. Vanatta

3765

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to RCE filed 4/2/04.
2. ☒ The allowed claim(s) is/are 3-7, 10 and 11.
3. ☒ The drawings filed on 23 August 2001 are accepted by the Examiner.
4. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☒ All    b) ☐ Some\*    c) ☐ None    of the:
    1. ☒ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  6. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
    - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).**
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08),  
Paper No./Mail Date 040204 and 040804
4. ☐ Examiner's Comment Regarding Requirement for Deposit  
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413),  
Paper No./Mail Date \_\_\_\_\_.
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_.

### REASONS FOR ALLOWANCE

1. The following is an examiner's statement of reasons for allowance:

Claim 3 is allowable over the prior art of record since the prior art does not disclose a method of opening continuous filaments including steps of transporting crimped tow by a plurality of rolls and applying a resistance on each side of the crimped tow by slidingly contacting each side with at least one sliding body at a location between the rolls, wherein each sliding body is adjustable with respect to its tilt angle and penetration amount into the transporting path of the tow. Neuert discloses three sliding bodies which contact the tow (18,20,22) and are adjustable. Although one of the sliding bodies 22 is adjustable with respect to a tilt angle (see deflecting bar 28, Fig. 7) and another sliding body 18 is adjustable with respect to a penetration amount (see deflecting elements 24 in Fig. 4), *each* sliding body is not adjustable in both tilt angle *and* penetration amount, as recited in claim 3. German Patent Doc. No. 586060 (see translation included herewith) discloses doctor knives (c) which can be adjusted by pivoting as shown in Figs. 1-3, which adjusts their penetration amount and their angle with respect to the threads, however the document does not disclose a step of transporting crimped tow and does not disclose that the tow filaments are caused to shift in a transporting direction of the tow to open the tow and spread the tow filaments in a latitudinal direction of the tow. In the German document (586060), the rolls transport sized and dried warp chain, which are contacted by the doctor knives to soften them.

Claim 7 is allowable over the prior art of record since the prior art does not disclose an opening apparatus for continuous filaments including a plurality of sliding bodies arranged between rolls of a transporting roll group such that each side of the tow is slidably contacted by at least one of the sliding bodies, and a detecting means for detecting a width of the spread continuous filaments after contact with the sliding bodies, as well as an adjusting means to adjust the tilt angle and penetration amount of each sliding body and a control means to control the adjusting means based on a value detected by the detecting means.

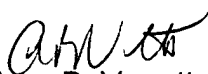
Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

2. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Amy B. Vanatta whose telephone number is 571-272-4995. The examiner can normally be reached on Monday through Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Calvert can be reached on 571-272-4983. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Amy B. Vanatta  
Primary Examiner  
Art Unit 3765